

REMARKS/ARGUMENTS

Applicant appreciates the Examiner's continued thorough search and examination with respect to the present patent application.

Applicant notes with appreciation the Examiner's indication that claim 20 is allowable.

Applicant further notes with appreciation the Examiner's indication that claims 6-7 and 14-16 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, claims 6 and 14 have been rewritten in independent form including all of the limitations of the base claim and any intervening claims, and are now in condition for allowance. Claim 7 depends directly from claim 6 and claims 15-16 depend from claim 14, and are also in condition for allowance.

Claims 1-5, and 8-12 stand rejected under 35 U.S.C. §102(b) as being anticipated by Robertsson ("Robertsson", U.S. Patent No. 3,927,480). Applicant respectfully traverses this rejection.

Applicant's claim 1 comprises a method for simulating the effect of an exploding projectile that includes "detecting a weapon signal by a sensor located near a target area" and "transmitting an impact signal when the weapon signal is sensed by the sensor[.]" The "impact signal" is caused to cover a simulated impact area including a "first portion of the impact area which is covered by the weapon signal" and a "second portion of the impact area" which is not covered by the weapon signal. The second portion is "part of the impact area of a simulated detonation of a projectile that would be fired by the weapon to the impact area." Thus, applicant's claim 1 is related to the simulation of the effect of exploding particles. The Examiner is respectfully referred to page 1, line 26 - page 2, line 5 of applicant's written description which describes the impact signal as "adapted to cover that portion of the impact area of the simulated explosion which cannot be covered by the weapon signal of the weapon." Applicant respectfully submits that the impact signal can relate to an impact area resulting from weapons that allow shooting around a corner of a structure. The shape of the impact area (including both the first and second portions) can be determined by the method of claim 1.

Robertsson, in contrast, regards a gunnery target scoring system which allows for practice sighting and firing a weapon towards a target (see column 1, lines 36-40 and column 4, lines 52-

55). Robertsson's invention calculates elevation and lateral settings of the weapon in order to improve accuracy, and does not teach or suggest an impact signal covering a first portion and a second portion of an impact area in which the second portion comprises part of the impact area not covered by a weapon signal. Instead, Robertsson teaches determining a detonation point using, among other things, a selected ammunition, firing time and a calculated distance between the weapon and a target. Robertsson uses a numeric system to determine the effectiveness of the weapon, and to determine the effect of the detonation by comparing the extension of the target in the firing direction and the divergence of the detonation point in the lateral and elevational direction. Applicant respectfully submits that Robertsson numeric system is different from applicant's impact signal and does not cover a second portion of an impact area. Robertsson also calculates a "hit effect number" to represent the susceptibility of the target and the type of ammunition used (see column 5, line 52-column 6, line 26). The hit effect number is used to determine whether the target has been knocked out, and, unlike applicant's claim 1, does not represent a simulated impact area including a first portion which is covered by the weapon signal and a second portion which is not covered by the weapon signal.

Applicant respectfully submits that Robertsson does not teach or suggest elements of applicant's claim 1, and, therefore, claim 1 is not anticipated by Robertsson.

Claim 2 includes all of the features of claim 1 and, therefore, is patentable for the same reasons as well.

With respect to claim 3, the Examiner cites to column 5, lines 15-17 and 26-34 to support the position that Robertsson discloses a device for simulating the effect of exploding projectiles fired by a weapon toward a target area, including a transmitter 27 operatively linked to a sensor 7, 14, such that the transmitter 27 emits an impact signal over the impact area of a simulated projectile. Applicant respectfully disagrees.

Applicant respectfully submits that the element represented by reference numeral 27 in Robertsson is not the transmitter of applicant's claim 3, but instead is a detonation position indicator that generates a "luminous spot which is reflected into the sight of the weapon and the position of which corresponds to the detonation point of a real projectile discharged[.]" (See column 5, lines 25-34). Unlike applicant's claim 3, Robertsson's transmitter serves to identify

the location where a projectile detonates and does not emit an impact signal over the impact area of the simulated projectile. Applicant further submits that, as shown in Fig. 5, Robertsson requires various computer devices 20, 21, 23, 25 and 26 for various calculations. Applicant respectfully submits that the usage of computers is not optimal due to an unrealistic delay between firing a weapon and its effect. The device of applicant's claim 3 requires only a sensor adapted for sensing a weapon signal, and a transmitter to emit an impact signal over the impact area of a simulated projectile. This construction eliminates the unrealistic delay caused by computer devices, such as disclosed in Robertsson. Thus, applicant respectfully submits that claim 3 is not anticipated by Robertsson, and, accordingly, claim 3 is patentable.

Claims 4 and 5 include all of the features of claim 3 and, therefore, are patentable for the same reasons as well.

Claims 8-12 depend directly or indirectly from claim 3, and are, therefore, allowable for the same reasons as well as because of the combination of features set forth in those claims with the features in the claim(s) from which they depend.

Claims 13 and 17-19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Robertsson in view of Hopmeier et al. ("Hopmeier", U.S. Patent Number 6,599,127). Applicant respectfully traverses this rejection.

The Examiner states that Robertsson discloses all of the claimed subject matter of claim 13, with the exception of explicitly disclosing that transmitter 27 emits an impact signal in the form of laser light. Accordingly, the Examiner cites to Hopmeier for disclosing a device "for simulating the effect of exploding projectiles fired by a weapon toward a target area, wherein simulated weapon 108 transmits a weapon signal to a sensor of controller 104, and wherein controller 104 transmits an impact signal to gas supply 102 via laser light." The Examiner concludes that it would have been obvious to an artisan to modify the transmitted impact signal of Robertsson by transmitting laser light beam of Hopmeier in order to "provide a suitable form of broadcast communication, and thereby providing a wireless link for transmitting impact information to other devices to simulate an explosion." Applicant respectfully disagrees.

Applicant respectfully maintains that elements of applicant's claim 3 are missing from the teachings of Robertsson. More particularly, Robertsson does not teach or suggest a transmitter

that emits an impact signal over the impact area of the simulated projectile. Applicant respectfully submits that Hopmeier does not cure this deficiency, and does not teach or suggest elements of applicant's claim 3 that are missing from the teachings of Robertsson. Applicant respectfully submits that the combination of Robertsson and Hopmeier does not teach the transmitter of applicant's claim 13, and, therefore, claim 13 is not obvious over the combined teachings of Robertsson and Hopmeier.

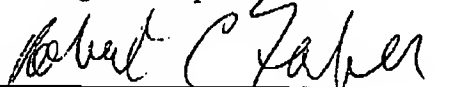
Claims 17-19 depend directly or indirectly from claim 3, and, therefore, are patentable for the same reasons as well as because of the combination of features set forth in those claims with the features set forth in the claim(s) from which they depend.

For the reasons set forth above, claims 1-20 are believed to be in condition for allowance.

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office, facsimile number (703) 872-9306 on: June 10, 2004:

Robert C. Faber

Name of applicant, assignee or
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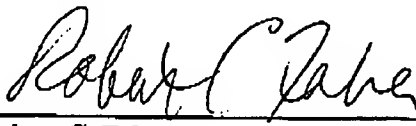
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June 10, 2004

Date of Signature

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Respectfully submitted,



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